**IMPROVING PRODUCTIVITY OF LOCAL CHICKENS THROUGH BETTER NUTRITION MANAGEMENT IN MIXED CROP-LIVESTOCK FARMING SYSTEMS, BABATI, TANZANIA.**

**Evaluation on the effect of improved homemade rations on growth and mortality in wet season in selected villages of Babati-Tanzania**

**Date: 3-10th May 2017 and 7-10th July 2017**

**BACKGROUND**

* The study on assessing of the effect homemade rations on growth and mortality of local chickens in dry season in the selected villages were done on September 2016 to February 2017.
* The chickens were partially supplemented with the home-made feed rations while allowed to utilise the scavengeable feed resources around the homestead.
* Other studies show that the scavengeable feed resources differ with seasons (Mutayoba et al 2012 and Golomera et al 2008). Moreover, the diseases intensity (which are the major cause for chick mortality) are also influenced by seasons (Swai et al 2007).
* Thus, the current activity intended to assess the effect of homemade rations on growth, mortality and disease incidences of the local chickens in wet season.
* The study was planned to be set early May 2017 just after the pick for the heavy rains and expected to cover three consecutive months, cacross the period of plenty scavengeable feed resources (the wet period) and the period of harvesting crops.
* A total of 720 growing chicks were allocated to three different villages (Matufa, Galapo and Seloto) for experiment.

**Main activities**

1. Selection of new farmers to form farmers’ groups
2. Training farmers on good poultry husbandry practices.
3. Setting experiment with farmers
4. Collection of data on the performance of chickens, both crossbred chickens and local chickens in the wet season
5. Designing the poultry houses and validating the plans with farmers

**IMPLEMENTATIONS OF ACTIVITIES**

The activities were initially planned to take place at one field trip. However, due delayed delivery of experimental chicks, the activities took place in two sub-trips. Even though, all activities were covered in the first sub-trip except distribution of chicks which were partially done in the first trip and completed in the second trip.

1. **Selection of new farmers to form farmers group**

A total of 24 new farmers (Adopters of the ongoing experimental technologies - baby) were selected from the three villages to form the farmer groups. Each village formed a group of 8 farmers as indicated at appendix 1. This activity was done during a sensitization meeting.

***Criteria for farmer’s selection***

* 1. Farmers who were ready for construction of poultry houses
  2. Farmers who were ready to contribute locally available feeds such as maize, maize bran, sunflower seed cake and vegetable waste for feed rationing.
  3. Farmers who were ready to participate in reasearch activities, including record keeping.

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| *Farmers selection at Matufa village* | *Farmers selection at Seloto villagebeing led by village extension officer* |

1. **Training farmers on good poultry husbandry practices.**

* A total of 80 farmers were trained. These involved 31females and 49 males as indicated in appendix 2.
* The training also involved one focal person from the district (Alfonce Haule) and village extension officers namely Muhidin Mbelwa, Patric Kisamo and David Chalamira from Galapo, Seloto and Matufa villages respectively.
* The training covered the following topics

1. Common poultry diseases, their control and treatment
2. Proper poultry feed rationing
3. Artifitial chicks rearing using normal boxes
4. Poultry houses and housing.
5. Field data collection

***Materials distributed in the training***

Diseases leaflets, poultry nutrition booklets and training notes as included in the attachments.

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| ***Farmers paying attention to the training at Seloto Village.*** | ***Farmers paying attention to the training at Matufa Village.*** |

1. **Setting experiment with farmers**

A total of 24 farmers were involved for the experiment. Each farmer was assigned with 30 experimental chicks, of which 12 were the indigenous while the 18 were the crossbred. The chicks were subjected to four feeding regimes as the treatments with replicate per village. These were 80%confinement with home-made balanced ration, 80%confinement with unbalanced ingredients (mainly maize bran –farmers practice), 80%scavenging + home-made balanced ration, 80% scavenging with unbalanced ingredients (mainly maize bran – Farmers’ practice). The balanced ration for supplementation is described in the distributed booklet (attached). The chicks were tagged and vaccinated against Newcastle, Gumboro, foel pox prior distribution to farmers.

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| *A group of farmers receiving experimental chicks at Matufa village.* | *Demonstration on chick handling at night using normal boxes and proper dosage of drugs* |

1. **Collection of data on the performance of chickens, both crossbred chickens and local chickens**

One local field technician within each village was trained on data collection to assist the data collection excersise in collaboration with farmers. These data are monthly monitored and collectively picked for data entry in the spread sheet.The data under collection are

* + Mortality rate at different feeding regimes
  + Disease incidences at different feeding regimes
  + Growth rate at different feeding regimes

1. **Designing the poultry houses and validating the plans with farmers**

This activity was done jointly with feed store designing. A comprehensive joint report is expected from the two teams (forage and poultry teams).

**CHALLENGES ENCOUNTERED**

* Scarcity of local chicks. The project encoutered a serious problem in availability of local chicks as most of the chicks in the markert are the exotic ones. This delayed the activity for more than a month as we were forced by the circumstances to pick the chicks from small scale breeder at two different bunches at an interval of more than month.

**DELIVERABLES**

* New 24 farmers (15 male and 7 females) were identified and involved in the improved feeding and housing experiment (appendix 1),
* A total of 80 farmers were trained on good poultry husbandry practices. These included 31 females and 49 males as indicated in appendix 2

**Observation during implementation of activities**

* Many farmers were interested on modern poultry keeping especially feed rationing, chick brooding (artificial brooding) and poultry house designs. Meanwhile, the farmers brood their chicks though natural brooding (using the hatching hens all over three consecutive months).
* Farmers are eager of getting artificial means of chick hatching and brooding so as to get a mass chicks at a time.
* Initially we have introduced the artifitial brooding technique through normal boxes and farmers were interested with the technique.

**CONCLUSION**

The activity was successfully completed and individual farmers showed a lot of enthusiasm and interest in the introduced technology. Farmers are willing to participate in cost of the technology.

**THE WAY FORWARD**

* Data collection on the performance of the introduced chicks at different feeding regimes and housing systems
* Introducing the artificial hatching technology (incubators) at the village level.
* Introducing modified artificial brooding techniques at farm level

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| **Appendix 1**  **Names of new farmers involved in the feeding and housing experiment in three villages** | | | | |
| S/No. | Name of the farmer | Sex | Contact | Village |
| 1 | John Laurian | male | +255784682227 | Seloto |
| 2 | Roman Helman | male | +255685512131 | Seloto |
| 3 | Abel Michael | male | +255786237696 | Seloto |
| 4 | Mrs John Qwari | Female | +255685375666 | Seloto |
| 5 | Mstafa Abel | Male | - | Seloto |
| 6 | Asteria Joseph | Female | +255783851862 | Seloto |
| 7 | Jacob Mohe | Male | +255785581708 | Seloto |
| 8 | Michael Bura | Male | +255786237696 | Seloto |
| 9 | Pascal Erasto | Male | +255686029275 | Galapo |
| 10 | Yazidu Hamadi | Female | +255687805420 | Galapo |
| 11 | Veronica Itamba | Female | +255684671587 | Galapo |
| 12 | Said Issa | Male | +255684340059 | Galapo |
| 13 | Mohamed Juma | Male | +255785110191 | Galapo |
| 14 | Hassan Monko | Male | +255782636657 | Galapo |
| 15 | Bakari Hassan | Male | +255786177806 | Galapo |
| 16 | Anna Hoti | Female | +255786814889 | Galapo |
| 17 | Hamis Salim | Male | +255782440445 | Matufa |
| 18 | Rehema Rashid | Female | +255688492731 | Matufa |
| 19 | Mrs Said Papai | Female | +255786394224 | Matufa |
| 20 | Rafael Lucus | Male | +255782405016 | Matufa |
| 21 | Janeth Chigome | Female | +255763512429 | Matufa |
| 22 | Hamisi Pingika | Male | - | Matufa |
| 23 | Ajuaye Mrisho | Male | +255767087903 | Matufa |
| 24 | Zuley Labai | Female | +255788831301 | Matufa |

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| **Appendix 2**  **Names of trained farmers at the three villages** | | | | |
| S/No. | Name of the farmer | Sex | Contact | Village |
| 1 | Hamis Salim | Male | +255782440445 | Matufa |
| 2 | Rehema Rashid | Female | +255688492731 | Matufa |
| 3 | Mrs Said Papai | Female | +255786394224 | Matufa |
| 4 | Rafael Lucus | Male | +255782405016 | Matufa |
| 5 | Janeth Chigome | Female | +255763512429 | Matufa |
| 6 | Hamisi Pingika | Male | - | Matufa |
| 7 | Ajuaye Mrisho | Male | +255767087903 | Matufa |
| 8 | Zuley Labai | Female | +255788831301 | Matufa |
| 9 | Khalfan Omary | Male |  | Matufa |
| 10 | Hamis Yahaya | Male |  | Matufa |
| 11 | Yohana Joseph | Male |  | Matufa |
| 12 | Mwajabu Sadick | Female | +255789683626 | Matufa |
| 13 | Mwanjaa khatibu | Female |  | Matufa |
| 14 | Rehema Khalili | Female |  | Matufa |
| 15 | Prisca Romani | Female |  | Matufa |
| 16 | Juma hussein | Male |  | Matufa |
| 17 | Martin Chisoti | Male |  | Matufa |
| 18 | Yusuph Masharia | Male |  | Matufa |
| 19 | Rehema Rashid | Female |  | Matufa |
| 20 | Hamis Ipingika | Male |  | Matufa |
| 21 | Lucus Ndimbo | Male |  | Matufa |
| 22 | Jumanne Mustafa | Male |  | Matufa |
| 23 | Lusina Salaya | Female |  | Matufa |
| 24 | Khadija Shabani | Female |  | Matufa |
| 25 | Julius Paul | Male |  | Matufa |
| 26 | Rafael Lucus | Male |  | Matufa |
| 27 | Shaban Chalambu | Male |  | Matufa |
| 28 | Zena Juma | Female |  | Matufa |
| 29 | Joseph Mussa | Male |  | Matufa |
| 30 | Baraka Yusuph | Male |  | Matufa |
| 31 | Juma Hussein | Male |  | Matufa |
| 32 | Douglas Chasusa | Male | +255763512429 | Matufa |
| 33 | Pascal Erasto | Male | +255686029275 | Galapo |
| 34 | Yazidu Hamadi | Female | +255687805420 | Galapo |
| 35 | Veronica Itamba | Female | +255684671587 | Galapo |
| 36 | Said Issa | Male | +255684340059 | Galapo |
| 37 | Mohamed Juma | Male | +255785110191 | Galapo |
| 38 | Hassan Monko | Male | +255782636657 | Galapo |
| 39 | Bakari Hassan | Male | +255786177806 | Galapo |
| 40 | Anna Hoti | Female | +255786814889 | Galapo |
| 41 | Maria Qeoim | Female |  | Galapo |
| 42 | Lidya Gideme | Female |  | Galapo |
| 43 | Maria Madonga | Female |  | Galapo |
| 44 | Willium Gideme | Male |  | Galapo |
| 45 | Bonday Gideon | Male |  | Galapo |
| 46 | Hiiti Margwe | Male |  | Galapo |
| 47 | Israel Sanka | Male |  | Galapo |
| 48 | Dehosia Sulleh | Female |  | Galapo |
| 49 | Mgeni Slaa | Male |  | Galapo |
| 50 | Veronica Itambo | Female |  | Galapo |
| 51 | Joseph Melalieki | Male |  | Galapo |
| 52 | Rose Omary | Female |  | Galapo |
| 53 | Catherine Selemani | Female |  | Galapo |
| 54 | Monical Pascal | Female | +255686029275 | Galapo |
| 55 | John Laurian | male | +255784682227 | Seloto |
| 56 | Roman Helman Mao | male | +255685512131 | Seloto |
| 57 | Abel Michael | male | +255786237696 | Seloto |
| 58 | Mrs John Qwari | Female | +255685375666 | Seloto |
| 59 | Mstafa Abel | Male | - | Seloto |
| 60 | Asteria Joseph | Female | +255783851862 | Seloto |
| 61 | Jacob Mohe | Male | +255785581708 | Seloto |
| 62 | Michael Bura | Male | +255786237696 | Seloto |
| 63 | Maria Jacob | Female |  | Seloto |
| 64 | Maria Boai | Female |  | Seloto |
| 65 | Tasala Petro | Female |  | Seloto |
| 66 | Betha Samwel | Female |  | Seloto |
| 67 | Patrice Sisti | Male | +255689588454 | Seloto |
| 68 | Naikishaani Lukumay | Female | +255759851991 | Seloto |
| 69 | Maria David | Female |  | Seloto |
| 70 | John Laurian | Male |  | Seloto |
| 71 | Nicolous Peter | Male |  | Seloto |
| 72 | Andrea Mai | Male | +255784811025 | Seloto |
| 73 | Vitalis Joseph | Male |  | Seloto |
| 74 | Happyness Kileo | Female |  | Seloto |
| 75 | Euphrosine Robert | Female |  | Seloto |
| 76 | Gaspor P. Meena | Male |  | Seloto |
| 77 | Kassian Malley | Male |  | Seloto |
| 78 | Lyochi Petro | Male |  | Seloto |
| 79 | Sylvestor Edward | Male |  | Seloto |
| 80 | Maria Petro | Female |  | Seloto |